

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Application of: Roy Lee Hood, et al : Examiner: Elizabeth M. Cole
Serial No.: 10/814,679 : Group Art Unit: 1771
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For: MULTI-COLOR MATS AND APPARATUS : Customer No.: 027128
: Confirmation No.: 8311

**APPEAL BRIEF TO BOARD OF PATENT APPEALS AND INTERFERENCES
UNDER 37 C.F.R. § 41.37**

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Sir:

Appellants submit the following Appeal Brief to the Board of Patent Appeals and Interferences:

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1. The Real Party In Interest.

The real party in interest for the above referenced application is Solutia, Inc., a Delaware corporation, located at 575 Maryville Center Drive, St. Louis, Missouri 63141, United States of America, the Assignee of record of the entire right, title and interest in the invention and the patent application.

2. Related Appeals and Interferences

There are no other appeals or interferences known to Applicants, (Appellants), the Applicants' (Appellants') Legal Representative or Assignee which will directly affect, or be directly affected by, or having a bearing on, the Board of Patent Appeals and Interferences' decision in the pending Appeal.

3. Status of Claim

Claims 1-5, 7-15 and 34-47 are currently pending in the application. Claim 6 has been cancelled. Claims 16-33 have been withdrawn.

Claims 1-5, 7-15, and 34-47 stand rejected and are the subject of this appeal. Claims 1, 34 and 47 are the only independent claims.

Applicants reserve their right to file additional applications to continue the prosecution of all withdrawn or cancelled claims.

4. Status of Amendments.

In the current application, an initial Rejection was mailed on January 27, 2005. On April 27, 2005, Applicants submitted an Amendment in response to the Rejection. A First Final Rejection was mailed June 24, 2005. On October 21, 2005, Applicants submitted an Amendment in response to the Final Rejection and requested Continued Examination. A Rejection was mailed on December 21, 2005. On April 14, 2006, Applicants submitted an Amendment in response to the Rejection. A Second Final Rejection was mailed on June 16, 2006. On August 1, 2006 a telephone conference took place with the Examiner. An Early Response to the Second Final Rejection was submitted on August 2, 2006. An Advisory Action before the Filing of an Appeal Brief was issued on August 9, 2006. On September 6, 2006, Applicants submitted an Amendment in response to the Second Final Rejection and requested Continued Examination. An Office Action was mailed November 16, 2006. On March 8, 2007, Applicants submitted an Amendment in response to the Second Final Rejection. A Third Final Rejection was mailed on May 11, 2007. On July 9, 2007, Applicants submitted a Notice of Appeal.

No further amendments were filed and all of the above referenced amendments were entered into the record.

5. Summary of the Claimed Subject Matter.

The present invention is directed generally to a three dimensional polymeric article, for example, an artificial turf mat and such a product as produced by a defined process. The article has a planar base portion with a first side and a second side and at least one (Claim 1) or more (Claim 34) projecting elements having a lower portion and a terminal portion. The projecting element extends from one side of the base. Various portions of the article are made from different polymers. The base portion and the projecting element are an integral molded structure.

Independent Claim 1. Claim 1 is directed to a three dimensional molded article having a planar base with first and second sides. At least one projecting element is provided and has a lower part and a terminal part. The projecting element portion extends from the first side of the base. The lower part of the projecting element includes a core portion and a surface portion. The core and the terminal part of the projecting element are formed of a first polymer. The surface portion is formed of a second polymer. The base and the projecting element are an integral molded construction.

Dependent Claim 2. Claim 2 further specifies that the first polymer contains a first colored pigment and the second polymer contains a second colored pigment.

Dependent Claim 3. Claim 3 further specifies that the base contains a pigment that is different from the terminal part of the projecting element.

Dependent Claim 4. Claim 4 further specifies that the projecting element is a plurality of projecting elements each having a terminal part. The base and a portion of the plurality of terminal parts for the plurality of projecting elements contain the same pigment and a portion of the plurality of terminal parts for the plurality of projecting elements contain a different pigment than the base.

Dependent Claim 5. Claim 5 further specifies various types of polymers for the first and second polymer materials.

Dependent Claim 7. Claim 7 further specifies that the article includes material selected from the group of dyes, pigments of distinct colors and other fillers.

Dependent Claim 8. Claim 8 further specifies that the first and second polymer material is polyethylene.

Dependent Claim 9. Claim 9 further specifies that the base includes a slip resistant sheet laminated to the base.

Dependent Claim 10. Claim 10 further specifies that the base includes open spaces.

Dependent Claim 11. Claim 11 further specifies that the at least one projecting element includes a plurality of such elements and that the base contains a pigment that is different than the pigment in at least a minority of the plurality of projecting elements.

Dependent Claim 12. Claim 12 further specifies that the base contains a distinct pigment.

Dependent Claim 13. Claim 13 further specifies that the first and second polymers comprise polyethylene and a density for the polymer.

Dependent Claim 14. Claim 14 further specifies that the article includes at least one disbursed functional filler selected from minerals, alumina, metal oxides, conductive fillers and conductive polymers.

Dependent Claim 15. Claim 15 further specifies that the projecting element includes a plurality of projecting elements and that each has a terminal part and at least some of the plurality of terminal parts are formed from at least one distinct polymer.

Independent Claim 34. Claim 34 is directed to a three dimensional polymeric article.

The article includes a generally planar base portion that has first and second sides. It also includes a first plurality of projecting element portions and a second plurality of projecting element portions. Each of the element portions has a lower part and a terminal part and extends from the first side of the base. The first plurality of projecting element portions are formed from a first polymer material and the second plurality of projecting elements are formed of a second polymer material. The base portion in the first plurality of projecting elements and the second plurality of projecting elements being an integral one piece thermoplastic article of molded construction.

Dependent Claim 35. Claim 35 further specifies that the first polymer material contains a pigment of the first color and the second polymer material contains a pigment of the second color.

Dependent Claim 36. Claim 36 further specifies that the base contains a pigment that is different from that of the first plurality of projecting elements.

Dependent Claim 37. Claim 37 further specifies that the base contains a pigment that is different from that of the at least one second plurality of projecting elements.

Dependent Claim 38. Claim 38 further specifies various polymers from which the first and second polymer materials are selected from.

Dependent Claim 39. Claim 39 further specifies that the article further includes material from the group consisting of dyes, pigments of distinct colors and other fillers.

Dependent Claim 40. Claim 40 further specifies that at least one of the first and second polymer materials is polyethylene.

Dependent Claim 41. Claim 41 further specifies that the article includes a slip resistant sheet laminated to the base.

Dependent Claim 42. Claim 42 further specifies that the base includes open spaces to facilitate cleaning.

Dependent Claim 43. Claim 43 further specifies that the base contains a pigment that is different than that of at least a minority of the plurality of projecting elements.

Dependent Claim 44. Claim 44 further specifies that the base contains a distinct pigment.

Dependent Claim 45. Claim 45 further specifies wherein at least one of the first and second polymer materials includes polyethylene with a specified density.

Dependent Claim 46. Claim 46 further specifies that the article include at least one disbursed functional filler selected from a group of listed fillers.

Independent Claim 47. Claim 47 is a product by process claim that produces a multi-color mat with a planar base portion and a plurality of projecting elements having a proximal end portion and terminal end portion. The proximal end portions have a core portion of one polymer and a surface portion of a second polymer. The mat is made by molding the base and surface portions as an integral structure and the cores and respective terminal end portions each as an integral structure that is integral with a respective proximal end portion.

6. Grounds of Rejection to Be Reviewed On Appeal

Claims 1-5, 7-15 and 34-47 are pending in the application and subject to this appeal.

Claims 16-33 which are not part of this appeal are withdrawn from consideration. Claim 6 was cancelled. Claims 1, 34 and 47 are independent claims. The remainder of the claims are dependent claims. The claims stand variously rejected as being either anticipated or obvious over various references as detailed below. Claims 1, 3, 5, 7, 8, 10-12, 34-40 and 42-44 stand rejected as being anticipated by or in the alternative obvious over Sallee, U.S. Patent 5,976,643. Claims 1, 9, 10 and 15 stand rejected as being anticipated by or in the alternative obvious over Zuiddam, et. al., U.S. Patent 4,866,808. Claims 1, 2, 5, 7, 10, 12, 15 and 47 stand rejected as being anticipated by or in the alternative obvious over Matsui, et. al., U.S. Patent 4,525,404. Claims 1, 5, 7, 10, 14 and 47 stand rejected as being anticipated by or in the alternative obvious over Fukuda, et. al., U.S. Patent 5,466,505. Claims 34, 39, 41, 44 and 46 stand rejected as being anticipated by Valyi, et. al., U.S. Patent 6,132,669. Claims 2 and 4 stand rejected as being obvious over Sallee. Claims 9 and 41 stand rejected as being obvious over Sallee in view of Nesbitt, U.S. Patent 5,549,938. Claims 13 and 45 stand rejected as being obvious over Sallee in view of Rawlinson, U.S. Patent 4,329,196. Claims 14 and 46 stand rejected as being obvious over Sallee in view of Sesselmann, U.S. Patent 5,790,987. Claims 35-37 and 43 stand rejected as being obvious over Valyi, et. al. Claims 38, 40 and 45 stand rejected as being obvious over Valyi, et. al. in view of Allan, et. al., U.S. Patent 5,851,474.

The issues presented are:

1. Whether the claims are anticipated under 35 USC 102(b) by the above-referenced patents;

2. Whether the claims rejected as being obvious under 35 USC 103(a) are obvious over the above referenced patents;
3. Whether or not complete prosecution as stated in the last Final Office Action has been provided; and
4. Whether the Examiner's positions in this case are arbitrary and capricious in that they are different from earlier actions taken by the Examiner in other applications, in particular,
 - (a) whether or not some claim terminology is structural or process,
 - (b) whether or not the phrase "integrally molded thermoplastic structure" is a structural phrase and
 - (c) whether the phrase converts an apparatus/structure claim to a product by process claim.

7. The Relevant Law

Anticipation

It is axiomatic that for a reference to support an anticipation rejection, it must disclose each and every element of the claim.

Anticipation requires that every limitation of the claim be found, either expressly or inherently, in a single prior art reference device or practice. See *Apple Computer, Inc. v. Articulate Systems, Inc.*, 234 F.3d 14 (Fed. Cir. 2000); *Gelcher v. Davidson*, 116 F.3d 1454 (Fed. Cir. 1997). That is, the reference must sufficiently describe the claimed invention so as to place it in the possession of the worker of ordinary skill in the art. *In re Paulsen*, 30 F.3d 1475 (Fed. Cir. 1994). However, the law does state that a reference disclosing a product inherently possessing a claim feature is still anticipatory but only if such inherency “would be appreciated by one of ordinary skill in the art.” *Glaxo, Inc. V. Novopharm Ltd.*, 52 F.3d 1043 (Fed. Cir. 1995).

The Board of Patent Appeals in *Ex parte Skinner*, 2 U.S.P.Q. 2d 1788 (Bd. Pat. App. 1986), held that the Examiner must provide some evidence or scientific reasoning that a functional limitation is an inherent characteristic of the prior art.

The Federal Circuit addressed the issue of anticipation through inherency in *Elan Pharmaceuticals, Inc. v. Mayo Foundation For Medical, Education and Research*, 304 F.3d 1221 (Fed. Cir. 2002). The court in finding no anticipation stated:

“The single reference must describe and enable the claimed invention, including all claim limitations, with sufficient clarity and detail to establish that the subject matter already existed in the prior art and that its existence was recognized by persons of ordinary skill in the field of the invention... The reference must describe the applicant’s

claimed invention sufficiently to have placed a person of ordinary skill in the field of the invention in possession of it... When anticipation is based on inherency of limitations not expressly disclosed in the assertedly anticipating reference, it must be shown that the undisclosed information was known to be present in the subject matter of the reference... An inherent limitation is one that is inherently present; invalidation based on inherency is not established by "probabilities or possibilities"... Inherency cannot be based on the knowledge of the inventor; facts asserted to be inherent in the prior art must be shown by evidence from the prior art... No doctrine of patent law is better established than that a prior art patent or other publication to be an anticipation must bear within its four corners adequate directions for the practice of the patent invalidated. If the earlier disclosure offers no more than a starting point for further experiments, if its teachings will sometimes succeed and sometimes fail, if it does not inform the art without more how to practice the new invention, it has not correspondingly enriched the store of common knowledge, and it is not an anticipation".

A patent claim "cannot be anticipated by a prior art reference if the allegedly anticipatory disclosures cited as prior art are not enabled". See, Rasmussen v. Smithkline Beecham Corporation, 413 F.3d 1318, 75 U.S.P.Q. 2d 1297 (Fed. Cir. 2005), citing to *Elan*, supra. The standard for what constitutes proper enablement of a prior art reference for purposes of anticipation under §102, however, differs from the enablement standard under §112. The *Rasmussen* court in citing to *In re Hafner*, 56 C.C.P.A. 1424, 410 F.2d 1403 (C.C.P.A. 1969), a case involving a unique fact situation where an inventor was trying to claim filing date priority to an earlier filed application, held that a disclosure lacking the teaching of how to use a fully disclosed compound for a specific, substantial utility or of how to use for such purpose a

compound produced by a fully disclosed process may be non-enabled under §112 but still be available as an anticipatory reference under §102. §112 provides that the specification must enable one skilled in the art to use the invention whereas §102 makes no such requirement as to an anticipatory disclosure.

Thus, a reference must itself be enabled and must enable the claimed invention to be adequate to support an anticipation rejection.

Obviousness

A finding of obviousness must be based on four underlying factual determinations:

- (1) The scope and content of the prior art;
- (2) The differences between the prior art and the claimed invention;
- (3) The level of ordinary skill in the art; and
- (4) Objective considerations of non-obviousness such as commercial success,

long felt but unmet need, failure of others to make the invention, and the like. See, *Graham v. John Deere Co.*, 148 U.S.P.Q. 459 (1966). Failure to make these determinations precludes the making of a *prima facie* case of obviousness.

The Patent Office must make the necessary findings and provide an administrative record showing the evidence on which its findings are based and its reasoning in reaching its conclusion. See, *In re Zurko*, 258 F.3d 1379, 59 U.S.P.Q.2d 1693, 1697 (Fed. Cir. 2001). When patentability turns on the question of obviousness, the search for and analysis of the prior art must include evidence relevant to the finding of whether there is a teaching, motivation or suggestion to select and combine the references relied on as evidence of obviousness. See, *In re Sang Su Lee*, 277 F.3d 1338, 61 U.S.P.Q.2d 1430 (Fed. Cir. 2002) citing, *McGinley v. Franklin Sports, Inc.*, 262 F.3d 1335, 60 U.S.P.Q.2d 1001, 1008 (Fed. Cir. 2001). There must be a reason

to combine the references. The reason to combine references must be based on objective evidence of record. Prior to *KSR International Co. v. Teleflex, Inc.*, 550 U.S. ___, 127 S. Ct. 1727 (2007), the Federal Circuit required that there be a showing of a suggestion, teaching or motivation to combine the prior art references as an essential component of an obviousness holding. *C. R. Bard, Inc. v. M3 Systems, Inc.*, 157 F.3d 1340, 48 U.S.P.Q.2d 1225, 1232 (Fed. Cir. 1998). Although the Supreme Court rejected this rigid requirement the test is still alive and can be used to provide helpful insight. The Patent Office has advised its examiners that this test will still be used in obviousness evaluations and the patent examiner still needs to look for specific reasons why the prior art would be combined into a new patent before rejecting applications for obviousness.

Particular findings must be made as to the reason why a skilled artisan with no knowledge of the claimed invention would have selected the components for combination in the manner claimed. *In re Kotzab*, 217 F.3d 1365, 55 U.S.P.Q.2d 1313, 1317 (Fed. Cir. 2000). The Patent Office must identify specifically the principal known to one of ordinary skill, that suggests the claimed combination. *In re Rouffet*, 149 F.3d 1350, 47 U.S.P.Q.2d 1453, 1459 (Fed. Cir. 1998). The Patent Office must explain the reasons why one of ordinary skill in the art would have been motivated to select the references and to combine them to render the claimed invention obvious. Further, the Patent Office can satisfy the burden of showing obviousness of the combination only by showing some objective teaching in the prior art or that knowledge generally available to one of ordinary skill would lead that individual to combine the relevant teachings of the references. See, *In re Fritch*, 972 F.2d 1260, 23 U.S.P.Q. 1780, 1783 (Fed. Cir. 1992). The factual question of motivation is material to patentability and cannot be resolved on subjective belief and unknown authority. It is improper in determining whether a person of

ordinary skill would have been led to this combination of references simply to “use that which the inventor taught against the teacher.” *W. L. Gore v. Garlock, Inc.*, 721 F.2d 1540, 220 U.S.P.Q. 303, 312-13 ((Fed. Cir. 1983)). The Patent Office must examine the relevant data and articulate a satisfactory explanation for its action or position including a rational connection between the facts found and the choice made. *Motor Vehicles Manufacturers Association v. State Farm Mutual Automobile Ins. Co.*, 463 U.S. 29, 43 (Sup. Ct. 1983).

Where a trade off between features is required to produce an invention from a combination of references, motivation to combine requires the tradeoff be desirable not just feasible. See, *Winner International Royalty Corp. v. Wang*, 202 F.3d 1340, 53 U.S.P.Q.2d 1580 (Fed. Cir. 2000).

It has been held that supporting a rejection on common knowledge and common sense is inappropriate. Reference to common knowledge without evidence in support or explanation in support is inappropriate. See, *Smiths Industries Medical Systems, Inc. v. Vital Signs, Inc.*, 1836 F.3d 1347, 51 U.S.P.Q.2d 1415, 1421 (Fed. Cir. 1999). Failure to articulate an appropriate reason for the rejection is fatal to the position of obviousness. The Patent Office cannot merely make conclusory statements when dealing with particular combinations of prior art but must set forth the rationale on which it relies. *In re Sang Su Lee*, supra. Thus, it is improper to state a combination is within ordinary skill in the art without support.

An appropriate analysis in the determination of obviousness may not indulge in forbidden hindsight evaluation. “Our case law makes clear that the best defense against the subtle but powerful attraction of a hindsight-based obviousness analysis is rigorous application of the requirement for a showing of the teaching or motivation to combine prior art references. *In re Dembicza*k

teachings of references can be combined only if there is some suggestion or incentive to do so.

See *ACS Hosp. Sys., Inc. v. Montefiore Hosp.*, 732 F.2d 1572, 221 U.S.P.Q. 929, 933 (Fed. Cir. 1984). (It is yet unclear if these tests will withstand the Supreme Court decision in *KSR International Co.*, supra.)

Another important consideration in the determination of obviousness is who is one of ordinary skill in the art and what is the level of ordinary skill in the art. One cannot determine if an invention would have been obvious to one of ordinary skill in the art without first determining who that person would be. Several factors are evaluated to determine the level of ordinary skill. Those factors include: 1) the types of problems encountered in the art; 2) the prior art solution to those problems; 3) the rapidity of innovation; 4) the sophistication of the technology; and 5) the educational level of active workers in the field. See *Ruiz v. A.B. Chance Co.*, 234 F.3d 654, 57 U.S.P.Q.2d 1162 (Fed. Cir. 2000).

The Examiner must review all prior art even that art which will not support the rejection. See Section 706 MPEP and *Panduit Corp. v. Dennison Mfg. Co.*, 774 F.2d 1082, (Fed. Cir. 1985). Further, the Patent Office cannot pick and choose between references or teachings in references. See *In re Wesslau*, 353 F.2d 238 (CCPA 1965). See also *Dennison Mfg. Co. v. Panduit Corp.*, 475 U.S. 809, 106 S.C.T. 1578, 89L.Ed. 2 D 817 (S.C.T. 1986).

The court in the *Gillette Company v. S.C. Johnson & Son, Inc.*, 919 F.2d 720 (Fed. Cir. 1990) held that it is improper to focus on the obviousness of substitutions and differences instead of on the invention as a whole.

The Federal Circuit held in *In re Peterson*, 315 F.3d 1325 (Fed. Cir. 2003) that an applicant may rebut a prima facie case of obviousness by showing that the prior art teaches away from the claimed invention in any material respect. The court cited to *In re Geisler*, 116 F.3d at

page 1469 (Fed. Cir. 1997) and to *In re Malagari*, 499 F.2d at page 1333 (CCPA 1974). See also MPEP §§ 2142, 2143, 2144 and 2145.

Arbitrary and Capricious Action

Reasoned findings are critical to the performance of an agency's functions and judicial reliance on agency findings. Absent reasoned findings based on substantial evidence, effective review would become lost in the haze of so called expertise. See *Baltimore and Ohio Railroad Co., v. Aberdeen & Rockfish Railroad Co.*, 393 U.S. 87, 91-92 (Sup. Ct. 1968).

The Federal Circuit Court of Appeals, in *In re Sang-Su Lee*, 277 F.3d 1338 (Fed. Cir. 2002) explained the duties of the United States Patent and Trademark Office in making findings in support of their decisions. Conclusory statements without the proper support are not adequate to support an agency's findings. A factual question cannot be resolved on subjective belief and unknown authority. The PTO must not only assure that the requisite findings are made, based on evidence of record, but must also explain the reasoning by which the findings are deemed to support the agency's conclusion. The court cites to 5 U.S.C. §706(2) stating that the reviewing court shall hold unlawful and set aside any agency actions, findings and conclusions found to be arbitrary, capricious, an abuse of discretion or otherwise not in accordance with law. The Administrative Procedure Act requires that an agency not only have reached a sound decision but have articulated the reasons for that decision. The agency must provide an administrative record showing the evidence on which the findings are based accompanied by the agency's reasoning in reaching its conclusions. These must be found within the four corners of the record. Presumptions are not adequate. Mere conclusions will not suffice. The court further held that a decision by an agency tribunal that has an omission of a relevant factor required by precedent is

both legal error and arbitrary agency action. Most importantly the court stated that an agency is not free to refuse to follow precedent.

The court in *Garrett v. FCC*, 513 F.2d 1056 (CA DC 1975) addressed the denial of a change to a radio station license and a claim of disparate decisional treatment by an administrative body. The court stated that they have twice said that an agency cannot act arbitrarily nor can it treat similar situations in dissimilar ways. "...(T)hat agency action cannot stand when it is "so inconsistent with its precedence as to constitute arbitrary treatment amounting to an abuse of discretion." The court further held "It is clear, however, not only that '[m]ore than enumeration of factual differences between cases is required,' but also that "the commission must explain their relevance to the purpose of the 'legislation' it administers. ... It is a simple but fundamental rule of administrative law ... "that a reviewing court, in dealing with a determination or judgment which an administrative agency alone is authorized to make, must adjudge the propriety of such action solely by the grounds invoked by the agency." ...We cannot accept rationalizations offered by counsel as an adequate substitute for a response due the commission itself. It is neither for counsel nor for us, but for the commission itself, to explain any distinguishing characteristics it finds appealing, and to do so on a basis demonstrative of their pertinence to its statutory responsibilities."

In *Deaton, Inc. v. Interstate Commerce Commission*, 693 F.2d 128, 131 (CA 11 1982), a case involving a grant of authority to a trucking company, the court held, "Of course, to survive judicial review under the arbitrary and capricious standard, an agency must explain the rationale for its decision."

In the case *Marco Sales Company v. Federal Trade Commission*, 453 F.2d 1 (CA 2 1971), the court addressed an issue of the FTC's regulation of certain alleged gambling activities.

The court held ... “[o]n the other hand, as the *Moog Industries* case also indicates, the FTC does not have unbridled power to institute proceedings which will arbitrarily destroy one of many law violators in an industry. The arbitrary character of the Commission’s action here consists of its total failure to even advert to, much less explain, its reason for the rigid ad hoc adjudicatory stance it adopted toward the petitioner and the flexible tolerance its industry regulation displayed to those utilizing the same or similar devices ... But law does not permit an agency to grant to one person the right to do that which it denies to another similarly situated. ... Section 8(b) of the Administrative Procedure Act (5 U.S.C. §557(c)) requires an agency in any case to include in its decision its findings and conclusions as well as the reasons or basis therefor. This requirement takes on added importance when the decision is apparently inconsistent with the virtually contemporaneously declared rule. ... That an administrative agency is obligated to provide petitioner with an explanation for the difference in their treatment, is well established.”

Complete Prosecution

An examiner must provide reasoning for the rejection and cite to material(s) used to support the rejection. MPEP § 706 and 37 CFR 1.104.

8. Arguments.

By way of background, each of the references is briefly discussed.

Sallee is directed to a garnish which is comprised of a perforated mat having a plurality of tuft filaments or strips attached to the mat which is camouflaged. It is specifically desired, as pointed out at column 2 starting at line 35, that the tufts be interchangeable so as to provide for variable patterns of shape and color to garnishes. The device is specifically devised to reduce thermal image. The device is complicated in structure, time consuming to assemble and is used on vehicles for disguising the vehicle. It is also disclosed at column 5 starting at line 37, that the attachment of the tufts may be permanent or more preferably releasable and reattachable. There is no disclosure on how the attachment may be made permanent or what, in context, "permanent" means, but, all forms of attachment described are of a mechanical locking type.

Zuidam, et. al., disclose a matrix of right angle disposed slats having openings therebetween. The filaments are secured in channels in the profiles 12 by mechanical attachment. It is disclosed that the slats may be welded together to form the mat. It is disclosed that the bristle-like filaments are fixedly positioned in the u-shaped profiles.

Matsui, et. al. disclose a pile article wherein the pile fibers are composed of a sheath-core composite fiber. The diameter of the pile fibers is on the order of 5-25 micrometers which is roughly 0.001 inch in diameter. The fibers may then be made into a pile article by pile weaving or pile knitting, silver knitting, tufting, electric flocking, etc. as pointed out in column 6 starting at line 9. This final product appears to be a fake "fur".

Fukuda, et. al. disclose a napped fabric. The fabric can be used, for example, in car seat covers and the like. The fibers are of composite construction with a sheath and a core with the core showing on the free end of the fibers. The finished fabric resembles natural fur.

Valyi, et. al. disclose a process for preparing a molded article forming a laminated structure. In column 4 starting at line 52 there is a discussion of an integral molded structure. Sesselmann discloses an odor absorbing clothing. Various materials in the layers of the clothing may be non-woven, closely woven and may be adhered together by stitching or the like.

Rawlinson discloses a method of making a three dimensional layer that is laminated to a thermoplastic substrate by an infusion bonding process. The process is directed to making an artificial turf.

Nesbitt discloses a removable camouflage material that is constructed of a magnetic material for removable adherence to a vehicle. A polymeric sheet is laminated to the magnetic base material by gluing or otherwise as disclosed in column 5 at line 25.

Allan, et. al. discloses an injection molding process apparently utilizing a plurality of materials in the same part.

Legally Deficient Obviousness Rejections (Incomplete Prosecution)

Claims 1, 3, 5 7, 8, 10-12, 34-40 and 42-44 stand rejected under 35 USC 103(a) as being obvious over Sallee for the reasons set forth in paragraph 7 of the previous Office Action mailed 11/16/2006. There is no obviousness rejection in paragraph 7 of this previous Office Action nor in any of the paragraphs of the last Office Action. There is reference in paragraph 3 of that Action to an obviousness rejection over Sallee which references paragraph 7 of the twice previous Office Action mailed 12/21/2005, but there is no obviousness rejection in that paragraph either.

Claims 1, 9, 10 and 15 are also rejected as being obvious but over Zuiddam, et. al. for the reasons set forth in paragraph 8 of the previous Office Action. Again, there is no obviousness rejection of these claims in paragraph 8 of the previous Office Action. In paragraph 4 of the

previous Action, there is an obviousness rejection stating that the claims are obvious for the reasons set forth in paragraph 8 of the twice previous Action. Paragraph 8 of the twice previous Office Action has no obviousness rejection of these claims.

Claims 1, 3, 5, 7, 10, 12, 15 and 47 stand rejected as being obvious over Matsui, et. al. as set forth in paragraph 9 of the previous Office Action. There is no obviousness rejection of these claims in paragraph 9 of the previous Office Action. However, paragraph 5 of the previous Action references an obviousness rejection in paragraph 9 of the twice previous Office Action. However, there is no obviousness rejection in paragraph 9 of the twice previous Office Action as stated. Additionally, Claim 47 was not pending at the time of the referenced Office Actions.

Claims 1, 5, 7, 10, 14 and 47 stand rejected as being obvious over Fukuda, et. al. as set forth in paragraph 10 of the previous Office Action. Again, there is no obviousness rejection in paragraph 10 of the previous Office Action. However, these claims were discussed in paragraph 6 of that Action as being obvious for the reasons set forth in paragraph 10 of the twice previous Office Action. Again, there is no obviousness rejection in the twice previous Office Action of these claims. Additionally, Claim 47 was not pending at the time of the referenced Office Actions.

The deficiencies of the foregoing rejections were pointed out by Applicants to the Patent Office in Amendment E but not addressed by the Patent Office. These rejections must be reversed.

Thus, there is no obviousness rejection pending for Claims 1, 34 and 47, only anticipation rejections as discussed below.

For purposes of this appeal, the patentability of Claims 2-15 which depend from Claim 1 either directly or indirectly, stand or fall on the patentability of Claim 1.

For purposes of this appeal, Claims 35-46 which depend from Claim 34 either directly or indirectly, rise or fall on the patentability of Claim 34.

That leaves for discussion Claim 1 being rejected as anticipated by Sallee, Zuiddam, et. al., Matsui, et. al. and Fukuda, et. al., Claim 34 being rejected as anticipated by Sallee and Valyi, et. al. and Claim 47 being rejected as anticipated by Matsui, et. al. and Fukuda, et. al. These will be discussed in turn.

There is an issue that is common to all rejections, that is, whether or not the claim terminology, e.g., “integrally molded thermoplastic structure” is a structural term and thus distinguished from the cited references or whether it is a process step rendering the claim a product by process claim. It is pointed out that claims 1 and 34 are the classic article claim with the preamble so indicating. Claim 47 was added as a true product by process claim. In this regard, the Board’s attention is directed to the following. In the case *Pen Tec, Inc. v. Graphic Controls Corp.*, 224 U.S.P.Q. 976 (DC CD CA 1984), a case directly on point and involving almost identical claim language, the court treated the phrase “integrally molded hinged member” as a structural term and distinguished the claim language from hinges that had separate members. In further support of the subject claim language defining structure, the Examiner prosecuting this case has issued several patents apparently without objection to the claims being product by process claims but rather viewing them as structure claims. In U.S. Patent 7,172,802, Claim 1 includes the following terms which are similar to those objected to by the Examiner in the subject application. Those terms include woven, pigmented and polymer. Woven can be both a structural and process term as can pigmented. A polymer is formed by the process of polymerization. These terms in context define “structure” and/or “type” not process. In U.S. Patent 7,041,355, Claim 1 contains the terms molded shell, polymer and heat activated

expandable adhesive. In U.S. Patent 7,132,161, this Examiner approved electroflocked, bonded and “second fibers being arranged and configured.” In U.S. Patent 6,982,231, this Examiner approved a structure claim directed to a laminate and used the words bonded, stretched, breathability and non-woven. The position now taken by the Patent Office raises serious issues of violation of the Due Process Clause under the Fifth Amendment and violation of the Administrative Procedures Act that forbids arbitrary and capricious actions. The issue of the meaning of the phrase “integrally molded thermoplastic structure” has yet to be discussed by the Patent Office except to dissect the phrase and look at each individual word and then out of context. The use of “integrally molded thermoplastic structure” is as much structure as words commonly found in claims for example, bolt, fastener, laminate, welded, secured and many others. Numerous words used in patents and patent claims have both a verb or action form and a structure or noun form. Some of these have just been mentioned. The use of such words permits of economy of words, clarity and definiteness. How would one define a welded structure without using “welded”? This issue has been raised during prosecution and no substantive response has been received. The Patent Office, with a single stroke of the pen, potentially invalidated thousands of patents with this position.

Thus, a principal issued presented to the Board is whether or not the phrase “integrally molded thermoplastic structure” is a structural term or if the phrase converts the claim to a product by process claim as alleged by the Patent Office. It is submitted that the phrase is structural and therefore clearly distinguishes all the claims that have been rejected as anticipated as patentable over the cited references. Since none of the references, as conceded by the Patent Office, do not show an integral molded structure, the phrase “integrally molded thermoplastic” is an adjectival phrase modifying “structure” defining the specific type of structure as would the

phrase woven cloth or welded assembly. The anticipation rejections are thus in error and must be reversed. The subject phrase cannot be dissected and a meaning given to each individual word. To do so is error and inconsistent with prior Patent Office practices as evidenced by patents issued by this very Examiner. The Examiner has conceded that the cited references do not disclose an integral molded structure, but rather argues that this is a product by process claim and the process to make the product is not a claim limitation. In fact, if one reviewed the dictionary for “molding” they would find that molding is both a verb i.e., performing the act of molding and the name of a thing, a molding, the thing produced by molding.

Claim 1

35 U.S.C. §102 rejection.

Claim 1 stands rejected as being anticipated by each of Sallee, Zuiddam, et. al., Matsui, et. al. and Fukuda, et. al.

Sallee discloses a low thermal signature camouflage garnish that has tufts filaments attached to an underlying perforated sheet. There is no disclosure in this patent of the claimed integral molded structure. There is also no disclosure of the particular projecting element having a lower part and a terminal part with the lower part having a core and a surface and the core in the terminal part are formed of the first polymer material. The Sallee structure includes a mounting plug with attachment filaments. If there is a core, it does not have a terminal part nor are all the parts of the integral molded construction.

With regard to the rejection over Sallee, the Examiner states that Sallee teaches an integral structure. This position is respectfully traversed. In column 5 of Sallee starting at line 37, it is disclosed that “the attachment to the base camouflaged material 100 may be permanent or, more preferably, releasable and reattachable, allowing removal and replacement of garnishes

of the invention.” There is no disclosure of what “permanent” attachment is or might be. Certainly, an integral molded structure is not disclosed which is conceded by the Patent Office. Additionally, it is not clear how the attachment can be permanent (as the Examiner needs to support the rejection) and the parts still be removable for replacement as the sentence appears to state. Further, it is not clear what is attached to the base camouflaged material in a permanent manner.

With regard to the Zuiddam, et. al. rejection, the Examiner points to column 3 where there is disclosure that the bristle portions can be fixedly positioned in the u-shaped channels. The Examiner also points to column 3, lines 38-50 in regard to ultrasonic welding. It is submitted that the Examiner is actually referring to column 4. What is welded together ultrasonically are the portions of the base 16 to form the underlying mat. The bristles 20 are not integrally attached to anything but are mechanically held in position in the u-shaped channels. This is not the defined integral molded structure not only with regard to the bristles 20 but also the base portion. There is no disclosed integrally molded thermoplastic structure as defined in Claim 1 and the claims depending therefrom.

The Zuiddam, et. al. references discloses only a base with so-called u-shaped plastic profiles each having a longitudinally extending channel therein. Filaments are mechanically secured within the profiles. There is no disclosure in this patent of the defined projecting element having a lower part and a terminal part with the lower part having a core of the same material as the terminal part and a surface formed of the second material all being of an integral molded structure. In fact, the Zuiddam, et. al. construction would be precluded from being formed by a molding process as can be used to make the current invention.

Claim 1 is also rejected as being anticipated by Matsui, et. al. Matsui, et. al. discloses pile articles having a core portion and an exterior portion. The pile fibers as formed are used to form a fabric. There is no disclosure of a structure having a planar base portion and integrally formed projecting element having a core with a terminal part of the same material and a surface portion of a different material. The only possible disclosure of a base might be found in column 6 starting at line 9 where it says the pile article can be produced by pile weaving or pile knitting, etc. No base is specifically disclosed and at best might be implied. Regardless, the other elements are not disclosed.

Claim 1 is also rejected as being anticipated by Fukuda, et. al. The disclosure in Fukuda, et. al. is similar to that in Matsui, et. al. It discloses a fiber with a core and an exterior. There is no disclosure however though of claimed elements. Those elements include the integrally molded thermoplastic structure and a generally planar base with a projecting element having a core of a first material extending to a terminal part and a surface of a different material. There is no disclosure of a base in this material. The only possible disclosure is that the produced fibers can be knitted as disclosed in Example 1.

The anticipation rejections of Claim 1 fail because none of the applied references discloses all the claimed elements as required for an anticipation rejection.

Claim 34

35 U.S.C. § 102 rejection

Claim 34 is similar in some regards to Claim 1 in that it defines a generally planar base portion and in addition has a first and second plurality of projecting elements instead of “at least one”. Each of the projecting elements has a lower portion and a terminal part. The first projecting elements are formed from a first polymer and the second plurality projecting elements

are formed from a second polymer. The first and second plurality of projecting elements and the base portion are an integrally molded thermoplastic structure.

As discussed above, the Sallee reference does not disclose an integrally molded thermoplastic structure. Additionally, it does not disclose the first and second projecting elements with the first being formed of one polymer and the second being formed of a second polymer. Sallee discloses a perforated mat into which is mounted a plug that holds filaments in place and secured to the base. Thus, each and every claimed element is not disclosed by Sallee and the rejection must fail.

Valyi, et. al. disclose a process for preparing a molded article. Valyi, et. al. do not disclose first and second groups of projecting elements and thus will not support an anticipation rejection for this reason alone. Valyi, et. al. disclose in essence a laminated structure having a plurality of layers in the form of film. See for example column 2 starting at line 48. Interestingly, the Examiner in paragraph 5 of the last Final Office Action states, in discussing Valyi, et. al., that the forming of Valyi, et. al. takes place in a mold and thus the resulting structure is a molded structure. This is contrary to the position taken by the Patent Office in the rejections that molding or a molded structure is a process term and the claims are a product by process claim and molded has no significance in apparatus claims. Valyi, et. al. disclose the use of a pre-formed film of material in a mold and molding additional material on top of that film. The Examiner states that the film of Valyi, et. al. anticipates the claimed base portion and the pattern to mold the plastic anticipates the claimed projecting element portions. However, this conclusion is in error. The only structure that appears to be applicable to claim 34 is that shown Figure 8. However, a careful reading of the specification at column 7 starting at line 55 indicates that separate parts 180 are secured in place on the mold portion 174 to provide exact

location thereon on the molded part 178. This structure is not the claimed integrally molded thermoplastic structure nor does it have projecting elements of first and second polymers. No other alleged “projecting” elements are found in the disclosure of the subject patent. Arguably, Figure 7 might show such a structure but a careful reading of the specification starting at column 7, line 39, states these two parts are inserts placed in the mold. It too does not have the integrally molded thermoplastic structure with projecting elements of first and second polymers. Further, it is not clear if these parts project from the molded article or not. Inherency must be certain. Thus, claimed elements are not present in the disclosure of Valyi, et. al. In addition, there is no integrally molded thermoplastic structure with regard to the projecting elements, if there are projecting elements, and the base portion disclosed by Valyi, et. al. Additionally, there is no disclosure that the so-called projecting elements 180 are polymeric material but simply are disclosed as reinforcement material or fasteners. Thus, Valyi, et. al. will not support an anticipation rejection of Claim 34 since claimed elements are not disclosed.

Claim 47

35 U.S.C. §102 rejection.

Claim 47 only stands properly rejected as being anticipated by Matsui, et. al. or Fukuda, et. al. There is no obviousness rejection of this claim as discussed above. There is no anticipation rejection of Claim 47 in paragraphs 9 or 10 in the referenced Office Action as stated by the Examiner. However, it is assumed that the Examiner is referring to paragraphs 9 and 10 of the Office Action prior to that Office Action i.e., that Office Action mailed June 15, 2006. However, Claim 47 was not addressed in the Office Action mailed June 15, 2006 since it was not present in the application until the Response to Office Action mailed November 16, 2006.

Firstly, the limitations in Claim 47 have not, been discussed in the rejection and the rejection must therefore be reversed. However, the references cited in anticipation rejections will be addressed. As discussed above, there is no disclosure in Matsui, et. al. of the molding of an integral structure. Matsui, et. al. discloses only the formation of fibers that may be used to make a pile. There is no disclosure of forming a base and the surface portions as an integral structure. Further, there is no disclosure of molding cores having a terminal end portion, each as an integral structure that is integral with a respective proximal end portion of the projecting elements. Thus, an anticipation rejection, if there is a proper rejection, cannot be supported by Matsui, et. al. In fact, it appears that the Examiner has treated Claim 47 (if it has been addressed) as a structure claim while the claim is a product by process claim.

Fukuda, et. al. is similar in its disclosure to Matsui, et. al. in that it forms co-extruded fibers having an inner core and an outer surface. There is no disclosure of molding a base and surface portions of the projecting elements as an integral structure and then molding cores and their respective end portions each as an integral structure that is integral with respective proximal end portions of the projecting elements. There is only disclosure that fibers be formed that can be turned into an end product as by knitting as disclosed in Example 1. Thus, Fukuda, et. al. will also not support an anticipation rejection of Claim 47, if there is a proper rejection. Again, in this rejection, Claim 47 is treated (if it is addressed) as a structure claim and not as a product by process claim.

It is respectfully submitted that the rejections of the claims are in error. It is further submitted that numerous of the claims have not been properly rejected particularly many of the obviousness rejections. It is respectfully requested that the Board reverse the Examiner on the rejections.

9. Conclusions.

It is clear that the rejections of the claims must be reversed. It is also respectfully requested that this Board find that the phrase "integrally molded thermoplastic structure" is structural as used in the claims and that the Patent Office has violated its obligations under the Administrative Procedures Act and the Fifth Amendment Due Process Clause.

Respectfully submitted,

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ATTORNEYS FOR APPLICANT

Appendix A – Claims Appendix

1. A three-dimensional polymeric article comprising a generally planar base portion having a first side and a second side and at least one projecting element portion having a lower part and a terminal part, with said projecting element portion extending from said first side of the generally planar base portion, wherein said lower part of said projecting element portion includes a core and a surface wherein said core and said terminal part of said projecting element portion are formed therethrough of a first polymer material and said surface is formed of a second polymer material, wherein said generally planar base portion and said projecting element portion being an integrally molded thermoplastic structure.
2. The article according to claim 1, wherein the first polymer material contains a first colored pigment and the second polymer material contains a second colored pigment.
3. The article according to claim 1, wherein the base contains a pigment that is different from the terminal part of the at least one projecting element.
4. The article according to claim 2, wherein the at least one projecting element includes a plurality of projecting elements each having a terminal part, wherein the base and a portion of the plurality of terminal parts for the plurality of projecting elements contain the same pigment and a portion of the plurality of terminal parts for the plurality of projecting elements contain a different pigment than the base.
5. The article according to claim 1, wherein the first polymer material and the second polymer material are polymers selected from the group consisting of polyolefins, polyethylene, polypropylene, vinyl polymers, polystyrene, styrene-acrylonitrile copolymers, styrene-butadiene copolymers, acrylonitrile-butadiene-styrene graft copolymers, polyvinyl

butyral, polyamides, nylon-6, nylon-6,6, thermoplastic, urethane polymers, thermoplastic elastomers, blends and alloys thereof.

7. The article according to claim 1, further comprising at least one from the group consisting of dyes, pigments of distinct colors and other fillers.

8. The article according to claim 1, wherein at least one of the first polymer material and the second polymer material is polyethylene.

9. The article according to claim 1, further comprising a slip-resistant sheet laminated to the base.

10. The article according to claim 1, wherein the base includes open spaces to facilitate cleaning.

11. The article according to claim 7, wherein the at least one projecting element includes a plurality of projecting elements and the base contains a pigment that is different from at least a minority of the plurality of projecting elements.

12. The article according to claim 7, wherein the base contains a distinct pigment.

13. The article according to claim 1, wherein at least one of the first polymer material and the second polymer material comprises polyethylene with a density in the range of between about 0.915 and about 0.92.

14. The article according to claim 1, further comprising at least one dispersed functional filler selected from the group consisting of minerals, alumina, metal oxides, conductive fillers and conductive polymers.

15. The article according to claim 1, wherein the at least one projecting element includes a plurality of projecting elements each having a terminal part and at least some of the plurality of terminal parts are formed from at least one distinct polymer.

34. A three-dimensional polymeric article comprising a generally planar base portion having a first side and a second side and at least one first plurality of projecting element portions and at least one second plurality of projecting element portions, each having a lower part and a terminal part and extending from said first side of the generally planar base portion, wherein said first plurality of projecting element portions are formed of a first polymer material and said second plurality of projecting element portions are formed of a second polymer material, wherein said generally planar base portion, said first plurality of projecting element portions and said second plurality of projecting element portions being an integrally molded thermoplastic structure.

35. The article according to claim 34, wherein the first polymer material contains a pigment of a first color and the second polymer material contains a pigment of a second color.

36. The article according to claim 34, wherein the base contains a pigment that is different from the at least one first plurality of projecting elements.

37. The article according to claim 34, wherein the base contains a pigment that is different from the at least one second plurality of projecting elements.

38. The article according to claim 34, wherein the first polymer material and the second polymer material are polymers selected from the group consisting of polyolefins, polyethylene, polypropylene, vinyl polymers, polystyrene, styrene-acrylonitrile copolymers, styrene-butadiene copolymers, acrylonitrile-butadiene-styrene graft copolymers, polyvinyl butyral, polyamides, nylon-6, nylon-6,6, thermoplastic, urethane polymers, thermoplastic elastomers, blends and alloys thereof.

39. The article according to claim 34, further comprising at least one from the group consisting of dyes, pigments of distinct colors and other fillers.

40. The article according to claim 34, wherein at least one of the first polymer material and the second polymer material is polyethylene.

41. The article according to 34, further comprising a slip-resistant sheet laminated to the base.

42. The article according to claim 34, wherein the base includes open spaces to facilitate cleaning.

43. The article according to claim 39, wherein the base contains a pigment that is different from at least a minority of the plurality of projecting elements.

44. The article according to claim 39, wherein the base contains a distinct pigment.

45. The article according claim 34, wherein at least one of the first polymer material and the second polymer material comprises polyethylene with a density in the range of between about 0.915 and about 0.92.

46. The article according to claim 34, further comprising at least one dispersed functional filler selected from the group consisting of minerals, alumina, metal oxides, conductive fillers and conductive polymers.

47. A multi-color mat comprising a generally planar base portion having a first side and a second side, the first side having a plurality of elements projecting therefrom each of the elements having a proximal end portion integral with the base portion and a terminal end portion integral with a respective proximal end portion, said proximal end portions having an internal core portion and an external surface portion, each said terminal end portion and respective core portion being formed of a first polymer material and the respective external surface portion being formed of a second polymer material, said mat being prepared by a process comprising the steps of:

- a) molding the base and surface portions as an integral structure; and
- b) molding the cores and respective terminal end portions each as an integral structure that is integral with a respective proximal end portion.

Appendix B – Evidence Appendix

U.S. Patents:

7,172,802
7,041,355
7,132,161
6,982,231